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What is Claimed is:

1. A composition comprising Nogo-B or a fragment of Nogo-B that retains a biological activity of NogoB.

2. The composition according to claim 1, wherein the biological activity is selected from the group

5 consisting of:

(a) promoting in a vascular endothelial cell cellular adhesion, cellular spreading, cellular migration and/or proliferation;

10 (b) inhibiting in a vascular smooth muscle cell migration;

(c) reducing pathological vascular remodeling;

(d) reducing neo-intima formation in a blood vessel;

(e) promoting angiogenesis;

15 (f) maintaining vascular homeostasis;

(g) promoting wound healing;

3. The composition according to claim 1, wherein the fragment comprises amino acids 1-200 of Nogo-B.

20 4. The composition according to claim 1 comprising full length Nogo-B.

5. The composition according to claim 1 wherein the Nogo-B is human.

6. The composition according to claim 1 which comprises a pharmaceutically acceptable carrier.

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- 25 7. The composition according to any one of claims 1-6, further comprising one or more additional components selected from the group consisting of: an excipient, a therapeutic agent, a diagnostic agent and a Nogo-B agonist.
- 30 8. The composition according to claim 7, wherein the additional therapeutic agent is selected from the group consisting of: an anti-inflammatory agent, an anti-coagulant- an anti-fibrotic agent; anti-hypertensive agent, lipid-lowering agent, immuno-suppressive agent.
- 35 9. The composition according to claim 1 wherein the Nogo-B fragment is detectably labeled.
10. The composition according to claim 9, where in the detectable label is selected from the group consisting of:
- 40 11. A composition comprising a Nogo-B antagonist.
12. The composition according to claim 11, wherein the NogoB antagonist is selected from the group consisting of: a monoclonal antibody, siRNA, an antisense nucleic acid, a ribozyme, a soluble peptide and a small
- 45 molecule.
13. The composition according to claim 11 comprising one or more additional components selected from the group consisting of: a pharmaceutically acceptable carrier, an excipient; a therapeutic agent and a
- 50 diagnostic agent.
14. The composition according to claim 11, wherein the Nogo-B antagonist is detectably labeled.

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15. A fragment of Nogo-B that retains a biological activity of Nogo-B.

55 16. A fusion protein comprising the fragment of Nogo-B according to claim 15 and an additional component.

17. The fusion protein according to claim 16, wherein the additional compound is selected from the group consisting of: GST, AP, immunoglobulin Fc, and cell
60 permeable peptides.

18. A nucleic acid molecule comprising a nucleotide sequence encoding the Nogo-B fragment according to claim 15 or the fusion protein according to claim 16.

19. The nucleic acid molecule according to claim 18,
65 operably linked to an expression control sequence.

20. A vector comprising the nucleic acid molecule according to claim 18.

21. The vector according to claim 20 selected from the group consisting of: AAV (adeno-associated virus),
70 lentivirus, adenovirus, retrovirus, Herpes virus.

22. A host cell comprising the nucleic acid molecule according to claim 18 or the vector according to claim 20.

23. An antibody that specifically binds the Nogo-B or
75 an antigen-binding portion thereof.

24. The antibody or portion according to claim 23 wherein the Nogo-B is human.

25. The antibody or portion according to claim 23 which is monoclonal.

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- 80 26. The antibody or portion according to claim 23 which is human, humanized or chimeric.
27. The antibody or portion according to claim 23, wherein the antigen-binding portion is selected from the group consisting of: F(ab); F(ab)', F(ab)'₂, a
85 single chain Fv, Fd, Fv and a dAb.
28. The antibody according to claim 23 which is a Nogo-B antagonist.
29. The antibody according to claim 23, which is a Nogo-B agonist.
- 90 30. A composition comprising the antibody according to any one of claims 23-29.
31. The composition according to claim 30, further comprising a component selected from the group consisting of: a pharmaceutically acceptable carrier,
95 an excipient, a therapeutic agent and a diagnostic agent.
32. A method for producing the fragment of Nogo-B according to claim 15 or the fusion protein according to claim 16 comprising the step of culturing the host
100 cell according to claim 22 under suitable conditions.
33. A method for producing the antibody according to claim 23 comprising the steps of immunizing a non-human animal with Nogo-B or an immunogenic fragment thereof under conditions suitable for eliciting an immune
105 response and recovering the antibody from the animal.
34. A nucleic acid molecule comprising a nucleotide sequence encoding the heavy chain or the light chain of

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antibody or portion according to any one of claims 23-27.

110 35. A vector comprising the nucleic acid molecule according to claim 34.

36. A host cell comprising the nucleic acid according to claim 34.

115 37. A method for producing the antibody or portion according to any one of claims 23-27, comprising culturing the host cell according to claim 36 under suitable conditions.

120 38. A method for detecting a subject in need of treatment with Nogo-B or a fragment thereof that retains a biological activity of Nogo-B comprising administering a detectably labeled molecule that binds NogoB and detecting the absence of Nogo-B.

125 39. A method for promoting angiogenesis in a subject in need thereof comprising the step of administering a composition according to claim 1.

40. A method for treating a disease or condition characterized by the absence of desired angiogenesis in a subject in need thereof comprising the step of administering a composition according to claim 1.

130 41. The method according to claim 40, wherein the disease or condition is selected from the group consisting of: coronary artery disease, wound healing, peripheral vascular disease associated with diabetes, peripheral vascular disease, peripheral artery disease.

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135 42. A method for treating or preventing a condition or
disease characterized by pathological vascular
remodeling in a subject in need thereof comprising the
step of administering a composition according to claim
1.

140 43. The method according to claim 42, wherein the
disease or condition is selected from the group
consisting of: hypertension, restinosis, transplant
vasculopathy, arteriosclerosis, ischemia, pulmonary
hypertension, asthma, myocardial infarction and
145 cerebrovascular infarction.

44. A method for promoting vascular quiescence in a
subject in need thereof comprising the step of
administering a composition according to claim 1.

150 45. The method according to claim 44, wherein the
subject suffers from a condition selected from the
group consisting of: asthma, hypertension, pulmonary
hypertension.

46. A method for inhibiting angiogenesis in a subject
in need thereof comprising the step of administering a
155 Nogo-B antagonist.

47. A method for treating or preventing a condition
characterized by undesired angiogenesis in a subject in
need thereof comprising the step of administering a
Nogo-B antagonist.

160 48. The method according to claim 46 or 47, wherein
the subject suffers from a condition selected from the
group consisting of: cancer, retinopathy, rheumatoid
arthritis, atherosclerosis, and arteriosclerosis.

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165 49. A method for reducing neointima formation in a blood vessel in a subject in need thereof comprising the step of administering a composition according to claim 1.

170 50. A method for inhibiting vascular injury-induced vascular narrowing or occlusion in a subject comprising the step of administering a composition according to claim 1.

51. A method for preventing vascular injury induced ischemia comprising the step of administering a composition according to claim 1.

175 52. A method for endothelial cell adhesion, spreading and migration comprising the step of contacting the cell with Nogo-B or a fragment thereof that retains a biological activity of Nogo-B.

180 53. A method for inhibiting vascular smooth muscle cell migration comprising contacting the cells with Nogo-B or a fragment thereof that retains a biological activity of Nogo-B.

185 54. A method for treating a subject suffering from a vascular injury comprising the step of administering a composition according to claim 1.